

Appl. No. 10/717,030  
Amdt. dated April 20, 2006  
Reply to Office action of Feb. 24, 2006

### REMARKS/ARGUMENTS

Claims 1-20 and 26-35 are resubmitted. Claims 1, 30-32, and 33 are currently amended. Claims 21-25 and 36-55 are being canceled as being drawn to non-elected inventions. Claims 2 and 34 are being canceled without prejudice or disclaimer of the subject matter. No new claims have been added.

Claims 1, 3, 5-9, and 30-32 have been rejected under 35 USC 102(b) as being anticipated by McCarville et al., U.S. Patent 5,968,445 ("McCarville"). Claim 33 has been rejected under 35 USC 103(a) as being unpatentable over Turner et al., U.S. Patent 5,651,850, ("Turner") in view of Koury, U.S. Patent 6,073,670. Claims 10-20 and 26-29 have been allowed. Claims 2, 4, 34, and 35 have been objected to as being dependent upon a rejected base claim but would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

### Allowable Subject Matter

Applicant respectfully accepts allowance of claims 10-20 and 26-29.

Claim 1 has been amended to include the limitations of claim 2 and claim 2 has been canceled without prejudice or disclaimer of the subject matter. Claim 2 being allowable if rewritten to include all of the limitations of the base claim and any intervening claims, Applicants therefore respectfully submit that claim 1 and claims 3-9, which are dependent from claim 1, are now in condition for allowance.

Claim 33 has been amended to include the limitations of claim 34 and claim 34 has been canceled without prejudice or disclaimer of the subject

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matter. Claim 34 being allowable if rewritten to include all of the limitations of the base claim and any intervening claims, Applicants therefore respectfully submit that claim 33 and claim 35, which is dependent from claim 33, are now in condition for allowance.

McCarville

Claims 1, 3, 5-9, and 30-32 have been rejected under 35 USC 102(b) as being anticipated by McCarville.

Claim 1 having been amended to include the limitations of objected to but allowable claim 2, it is believed that claims 1, 3, and 5-9 are now in condition for allowance, as addressed above.

Claim 30 has been amended, support for which can be found in the specification as originally filed, for example, at paragraphs **[050]** and **[051]**.

McCarville discloses a conventional seal (not shown, no number) (col. 8, lines 8-10) of membrane (bagging film) 50 around the entire structure (col. 8, lines 8-10) of composite material (prepreg sheets) 34 with release surface (parting film) 36 inside the vacuum chamber formed by the seal of the membrane 50 to the mandrel 30 (col. 6, lines 6-60; col. 7, line 65 to col. 8, line 27; and Figs. 2, 4, 5, 7). As known in the art, a conventional seal is not suitable for lay-up of composite material over the seal (in fact, McCarville teaches the composite material 34 inside the sealed membrane 50 is nowhere near the seal) and so release film 36 (or any release agent (col. 5, lines 48-55)) is not applied over the conventional seal but rather is inside the chamber and not anywhere near the conventional seal and especially not outside (covering) the seal relative to the chamber formed by the membrane and mandrel. The seal

functions to seal the composite material and release film inside the chamber between the membrane and the mandrel so that vacuum can be applied to withdraw volatiles (col. 8, lines 9-13 and col. 6, line 49 to col. 7, line 3; and col. 7 lines 38-40).

In particular, the release film (laminate release surface) does not cover the seal, in contrast to the laminate release surface that covers the seal as claimed by claim 30, as that would place the release film outside the chamber contrary to McCarville's teaching. Because McCarville's release film does not cover the seal, and because McCarville does not disclose lay-up of composite material over the seal, McCarville has no need for, and does not either motivate or suggest, deviating from the conventional seal to form a low profile seal, as claimed by claim 30, suitable for being covered by the release film so that lay-up of composite material over the seal could be achieved. Thus, a low profile seal and a release surface covering the seal, as claimed, perform different functions with a different structure and in different ways that are contrary to the principles of operation of McCarville. Thus, McCarville, contrary to anticipating the present invention, actually teaches away from the present invention as claimed by claim 30.

Therefore, Applicants submit that the rejections to claims 30-32 should be withdrawn.

Turner

Claim 33 has been rejected under 35 USC 103(a) as being unpatentable over Turner et al., U.S. Patent 5,651,850, ("Turner") in view of Koury, U.S. Patent 6,073,670. Claim 33 having been amended to include the limitations of objected to but allowable claim 34, it is believed that claims 33 and 35 are now

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in condition for allowance, as addressed above.

Nevertheless, Applicants note that although Turner may disclose a mandrel with a vacuum system comprising a number of small holes in the mandrel (col. 8, lines 1-9) Turner does not disclose a vacuum zone having a low profile vacuum seal at a boundary as claimed by amended claim 33 nor multiple zones separated by a rebate.

Therefore, it is believed that the rejections to claims 33 and 35 should be withdrawn.

#### CONCLUSION

Applicants would like to thank the Examiner for the allowance of claims 10-20 and 26-29 and notice of allowable subject matter. Reconsideration and withdrawal of the Office Action with respect to claims 1, 3-9, 30-33, and 35 are requested. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

In the event the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

Respectfully submitted,

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